

June 25, 2010

**ADDENDUM 2.0 TO THE QUALITY ASSURANCE SAMPLING PLAN
AIR SAMPLING AND MONITORING
FOR THE
DEEPWATER HORIZON INCIDENT**

1. PROJECT OBJECTIVES

The objective of this addendum to the sampling plan is to determine if ambient air collected along the Louisiana coastline as part of the BP Oil Spill has toxic organic compounds present in it.

This document summarizes the methods that will be used for the sampling, and analysis of air samples and should be used in conjunction with the Deepwater Horizon Incident Quality Assurance Sampling Plan dated 5 May 2010. The frequency of these activities and their likely locations are provided.

2. SAMPLING APPROACH AND PROCEDURES

The sampling approach that will be applied to the waste sampling addendum is discussed in this section and consists of the following activities:

- Air Sampling
 - Various locations along the Louisiana coastline

Sampling methods, locations, quality assurance (QA) procedures, and the analytical approach and methods that will be used are discussed in the following sections.

2.1 AIR SAMPLING

The exact number of samples to be collected and from which locations will be decided by the EPA. The samples will be collected following ERT SOP# 2121, High Volume Polyurethane Foam Sampling, included as Attachment 1. Ambient air will be drawn into a covered housing then through a glass fiber filter and Polyurethane Foam (PUF) plug by a high-flow-rate pump operating at approximately 250 liters per minute. Samples will be submitted to a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory for the following analyses:

- Polycyclic Aromatic Hydrocarbons (PAH) by Toxic Organic Compounds in Ambient Air Method TO-13A.

The complete list of compounds and their reporting limits are included as Attachment 2.

2.1.1 Quality Assurance/Quality Control Samples

START will collect field duplicate samples of air sample filters, and prepare filter blanks as needed during the removal action. QA/QC samples will be collected according to the following:

- Blind field collocated air samples will be collected during sampling activities at locations selected by the EPA. The data obtained from these samples will be used to assist in the quality assurance of the sampling procedures and laboratory analytical data by allowing an evaluation of reproducibility of results. Efforts will be made to collect duplicate samples in locations where there is visual evidence of contamination or where contamination is suspected. Blind field collocated samples will be collected at the rate of one duplicate for every 10 samples collected.
- Filter blanks will be prepared by analyzing a laboratory supplied filter from the same batch as the collected samples at a rate of one filter per batch per day. The blank filter will be used to evaluate possible contamination.

All data will be validated and approved by EPA.

2.2 SAMPLE MANAGEMENT

Sample handling, nomenclature and container/equipment decontamination procedures are discussed in the following subsections.

2.2.1 Sample Handling Procedures

Air samples will be collected using equipment and procedures appropriate to the matrix, parameters, and sampling objectives. The volume of the sample collected will be sufficient to perform the analysis requested. The PUF tubes will be stored, wrapped in aluminium foil to protect them from light and placed in a tightly sealed container. Personnel responsible for sampling will change gloves between each sample collection/handling activity.

The sample containers will be handled using gloves appropriate for the hazards involved with handling of petroleum spill related samples (e.g., nitrile). The gloves serve two purposes, (1) personnel protection, and (2) prevention of sample cross-contamination. The gloves shall be replaced at a minimum between each sample collected or as frequently as needed.

2.3 SAMPLE NOMENCLATURE

Sample identification involves the assignment of sample location numbers and sample depth indicators to all samples collected during the sampling activity. The EPA will specify the sample location number and depth of the samples in the field. Sampling personnel shall record this information using a permanent marker on a label applied to the side of the container.

For the purposes of the activity, each sample will receive an individual identification number consisting of a four-digit number (ex. SW01). A QC Code for the type of sample is added to designate a sample as normal (11), duplicate (12), or rinsate (43).

An example, Sample ID is: SW01-11. This number corresponds to a normal solid waste sample collected from location SW01.

Blind field duplicate samples will be identified in the same manner as the sample locations and will also follow in sequential order. These samples will be given a unique sample number so as not to be obvious to the laboratory.

2.3.1 Sample Container and Equipment Decontamination

Each sample shall be collected with clean decontaminated equipment. EPA and EPA contractors intend to utilize one-time use/dedicated equipment in order to avoid equipment decontamination during sample collection activities. If equipment reuse is necessary, decontamination will be required to prevent contamination of clean areas and cross-contamination of samples and to maintain the health and safety of field personnel. Decontamination of all sampling equipment will occur prior to sampling and between each sample location. Decontaminated sampling equipment and sample containers will be maintained in a clean, segregated area. Appropriate equipment decontamination procedures for field sampling equipment will be followed according to applicable EPA, EPA, ERT and EPA contractors' SOPs.

Equipment decontamination will be completed in the following steps:

- Methanol rinse with soft scrub brush to remove initial oil residue
- Tap water and Alconox rinse with soft scrub brush
- Deionized water rinse, three times
- Methanol rinse

Personnel decontamination procedures will be described in the site-specific HASP that will be prepared by EPA contractors and reviewed by the EPA prior to implementation of activities at the site.

2.4 SAMPLE PRESERVATION AND HOLD TIMES

EPA and EPA contractors will obtain and use pre-cleaned PUF sorbent cartridges, which are considered clean for up to 30 days when stored in their sealed containers. After sampling, the PUF tube should be wrapped in the original foil and placed into the original container for shipment to the laboratory. Ship and store samples chilled (<4 C) until receipt at the laboratory.

EPA will request 72-hour turnaround time for air analytical results unless otherwise advised based on discussions with the laboratory. Turnaround time is initiated when the samples are received at the laboratory and continues until the analytical results are made available to EPA. EPA and EPA contractors will also ensure that the maximum hold time, initiated when the samples are collected in the field, and continues until the samples are analyzed, are not exceeded. Samples that have been analyzed will be disposed by the designated laboratory in accordance with the laboratory SOPs.

3. ANALYTICAL APPROACH

Information regarding analytical methods and data validation procedures is discussed in the following sections.

3.1 ANALYTICAL METHODS

After samples are received by the laboratory, samples will be prepared and analyzed in accordance with the TO methods.

Deliverables will include preliminary data via email in PDF format and an Electronic Data Deliverable (EDD) in the Microsoft Excel format.

3.1.1 Chemistry Analytical Methods

Information regarding analytical methods, sample containers, preservation and hold times is included in Table 3-1.

Table 3-1

Analytical Method, Container, Preservation and Holding Times
BP Spill, Gulf Coast

Name	Analytical Methods	Matrix	Container	Preservation	Minimum Volume or Weight	Maximum Holding Time
PAH	TO-13A	Air	PUF tubes	4°C	Approximately 300m ³	7 days / 40 days analysis

EPA and EPA contractors will collect the air samples and submit them to the Test America, Inc. for analysis. The Test America address is:

30 Community Drive, Suite 11
South Burlington, VT 05403
Attn: Don Dawicki (802)-660-1990

The remaining requirements of the QASP are still in effect.